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Sequence Listing could not be accepted due to errors.
See attached Validation Report.
If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).
Reviewer: markspencer
Timestamp: [year=2009; month=4; day=30; hr=8; min=22; sec=15; ms=998;]

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Reviewer Comments:

1.

W213 Artificial or Unknown found in <213> in SEQ ID (1)
E224 <220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (1)
W213 Artificial or Unknown found in <213> in SEQ ID (2)
E224 <220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (2)
W213 Artificial or Unknown found in <213> in SEQ ID (3)
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<211> 14
<212> PRT
<213> Artificial sequence

<220>
<221> source
<223> Artificial peptide

<400> 1

Asp Glu Ser Gly Leu Pro Gln Leu Thr Ser Tyr Asp Cys Glu
1 5 10

For SEQ ID # 1 through 3, “Artificial peptide” is an insufficient response for numeric identifier <223>. Please explain the source of the genetic material. If the sequence is put together from several

organisms, please list those organisms. If the sequence is made in the laboratory, please indicate that the sequence is synthesized. Please make all necessary changes.

Please remove numeric identifier <221> from the feature describing the “Artificial Sequence.”

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Validated By CRFValidator v 1.0.3

Application No: 10531662 Version No: 3.0

Input Set:

Output Set:

Started: 2009-04-17 15:20:32.710
Finished: 2009-04-17 15:20:33.487
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 777 ms
Total Warnings: 3
Total Errors: 3
No. of SeqIDs Defined: 34
Actual SeqID Count: 34

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SEQUENCE LISTING

<110> RATCLIFFE, PETER J.
PUGH, CHRISTOPHER W.
SCHOFIELD, CHRISTOPHER J.
HEWITSON, KIRSTY S.

<120> HYDROXYLASES AND MODULATORS THEREOF

<130> 06843-0091

<140> 10531662
<141> 2005-10-21

<150> PCT/GB2003/004492
<151> 2003-10-16

<150> GB 0224102.4
<151> 2002-10-16

<150> GB 0226598.1
<151> 2002-11-14

<160> 34

<170> PatentIn Ver. 3.3

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<220>
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Asp Glu Ser Gly Leu Pro Gln Leu Thr Ser Tyr Asp Cys Glu
1 5 10

<210> 2
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<221> source
<223> Artificial peptide

<400> 2

Gln Leu Thr Ser Tyr Asp Cys Glu
1 5

<210> 3
<211> 17
<212> PRT
<213> Artificial sequence

<220>
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<220>
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<400> 3

Asp Glu Ser Gly Leu Pro Gln Leu Thr Ser Tyr Asp Cys Glu Val Xaa
1   5   10   15

Ala

<210> 4
<211> 58
<212> PRT
<213> Homo sapiens

<400> 4

Phe Asn Trp Asn Trp Ile Asn Lys Gln Gln Gly Lys Arg Gly Trp Gly
1   5   10   15

Gln Leu Thr Ser Asn Leu Leu Leu Ile Gly Met Glu Gly Asn Val Thr
            20   25   30

Pro Ala His Tyr Asp Glu Gln Gln Asn Phe Phe Ala Gln Ile Lys Gly
        35   40   45

Tyr Lys Arg Cys Ile Leu Phe Pro Pro Asp
    50   55

<210> 5
<211> 16
<212> PRT
<213> Drosophila melanogaster

<400> 5

Glu Leu Ala Ala Asp Leu Arg Val Ser Asp Leu Asp Phe Ala Gln Gln
1   5   10   15

<210> 6
<211> 42
<212> PRT
<213> Drosophila melanogaster

<400> 6

Pro Pro Asp Ala Val Asn Phe Trp Leu Gly Asp Glu Arg Ala Val Thr
1   5   10   15

Ser Met His Lys Asp Pro Tyr Glu Asn Val Tyr Cys Val Ile Ser Gly
            20   25   30

His Lys Asp Phe Val Leu Ile Pro Pro His
        35   40

<210> 7
<211> 14
<212> PRT
<213> Drosophila melanogaster

<400> 7

Ala Leu Lys Glu Asp Ile Ser Ile Pro Asp Tyr Cys Thr Ile
1   5   10

<210> 8
<211> 43
<212> PRT
<213> Drosophila melanogaster

<400> 8

Pro Gly Ala Val Asp Ile Lys Ala Trp Leu Gly Pro Ala Gly Thr Val
1   5   10   15

Ser Pro Met His Tyr Asp Pro Lys His Asn Leu Leu Cys Gln Val Phe
            20   25   30

Gly Ser Lys Arg Ile Ile Leu Ala Ala Pro Ala
        35   40

<210> 9
<211> 17
<212> PRT
<213> Homo sapiens

<400> 9

Lys Ile Val Arg Lys Leu Ser Trp Val Glu Asn Leu Trp Pro Glu Glu
1 5 10 15

Cys

<210> 10
<211> 44
<212> PRT
<213> Homo sapiens

<400> 10

Pro Asn Val Gln Lys Tyr Cys Leu Met Ser Val Arg Asp Ser Tyr Thr
1 5 10 15

Asp Phe His Ile Asp Phe Gly Gly Thr Ser Val Trp Tyr His Val Leu
20 25 30

Lys Gly Glu Lys Ile Phe Tyr Leu Ile Arg Pro Thr
35 40

<210> 11
<211> 16
<212> PRT
<213> Caenorhabditis elegans

<400> 11

Arg Phe Val Gln Glu Ile Ser Met Val Asn Arg Leu Trp Pro Asp Val
1 5 10 15

<210> 12
<211> 44
<212> PRT
<213> Caenorhabditis elegans

<400> 12

Pro Lys Val Glu Gln Phe Cys Leu Ala Gly Met Ala Gly Ser Tyr Thr
1 5 10 15

Asp Phe His Val Asp Phe Gly Gly Ser Ser Val Tyr Tyr His Ile Leu
20 25 30

Lys Gly Glu Lys Ile Phe Tyr Ile Ala Ala Pro Thr

35 40

<210> 13
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<213> Caenorhabditis elegans

<400> 13

Arg Phe Val Gln Asp Ile Ser Met Ala Lys Arg Leu Trp Ser Asp Val
1 5 10 15

<210> 14
<211> 35
<212> PRT
<213> Caenorhabditis elegans

<400> 14

Pro Lys Ile Glu Gln Ile Cys Ala Ala Ala Met Ala Asn Ser Tyr Thr
1 5 10 15

Asp Phe His Val Asp Phe Gly Gly Thr Ser Val Tyr Phe His Val Phe
20 25 30

Lys Gly Glu
35

<210> 15
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<213> Caenorhabditis elegans

<400> 15

Lys Ile Phe Tyr Ile Ala Ala Pro Thr
1 5

<210> 16
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<213> Drosophila melanogaster

<400> 16

Glu Ile Val Arg Gln Ile Asp Trp Val Asp Val Val Trp Pro Lys Gln
1 5 10 15

<210> 17
<211> 35

<212> PRT
<213> Drosophila melanogaster

<400> 17

Pro Lys Val Gln Lys Tyr Cys Leu Met Ser Val Lys Asn Cys Tyr Thr
1 5 10 15

Asp Phe His Ile Asp Phe Gly Gly Thr Ser Val Trp Tyr His Ile Leu
20 25 30

Arg Gly Ser
35

<210> 18
<211> 9
<212> PRT
<213> Drosophila melanogaster

<400> 18

Lys Val Phe Trp Leu Ile Pro Pro Thr
1 5

<210> 19
<211> 18
<212> PRT
<213> Saccharomyces cerevisiae

<400> 19

Gln Asn Asp Leu Val Asp Lys Ile Trp Ser Phe Asn Gly His Leu Glu
1 5 10 15

Lys Val

<210> 20
<211> 44
<212> PRT
<213> Saccharomyces cerevisiae

<400> 20

Pro Lys Val Thr Lys Tyr Ile Leu Met Ser Val Lys Asp Ala Tyr Thr
1 5 10 15

Asp Phe His Leu Asp Phe Ala Gly Thr Ser Val Tyr Tyr Asn Val Ile
20 25 30

Ser Gly Gln Lys Lys Phe Leu Leu Phe Pro Pro Thr
        35   40

<210> 21
<211> 61
<212> PRT
<213> Rattus norvegicus

<400> 21

Lys Thr Asp Val Phe Gln Glu Val Met Trp Ser Asp Phe Gly Phe Pro
1   5   10   15

Gly Arg Asn Gly Gln Glu Ser Thr Leu Trp Ile Gly Ser Leu Gly Ala
            20   25   30

His Thr Pro Cys His Leu Asp Ser Tyr Gly Cys Asn Leu Val Phe Gln
        35   40   45

Val Gln Gly Arg Lys Arg Trp His Leu Phe Pro Pro Glu
    50   55   60

<210> 22
<211> 57
<212> PRT
<213> Caenorhabditis elegans

<400> 22

Phe Glu Asp Asp Leu Phe His Tyr Ala Asp Asp Lys Lys Arg Pro Pro
1   5   10   15

His Arg Trp Phe Val Met Gly Pro Ala Arg Ser Gly Thr Ala Ile His
            20   25   30

Ile Asp Pro Leu Gly Thr Ser Ala Trp Asn Ser Leu Leu Gln Gly His
        35   40   45

Lys Arg Trp Val Leu Ile Pro Pro Ile
    50   55

<210> 23
<211> 60
<212> PRT
<213> Drosophila melanogaster

<400> 23

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Thr Ile Leu Asp Tyr Val Asn Lys Asp Tyr Asn Ile Gln Ile Asp Gly
1               5                   10                  15

Val Asn Thr Ala Tyr Leu Tyr Phe Gly Met Trp Lys Thr Thr Phe Ala
            20                  25                  30

Trp His Thr Glu Asp Met Asp Leu Tyr Ser Ile Asn Tyr Leu His Phe
        35                  40                  45

Gly Ala Pro Lys Thr Trp Tyr Val Val Pro Pro Glu
    50                  55                  60
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<210> 24
<211> 60
<212> PRT
<213> Homo sapiens

<400> 24

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Thr Val Leu Asp Val Val Glu Glu Glu Cys Gly Ile Ser Ile Glu Gly
1               5                   10                  15

Val Asn Thr Pro Tyr Leu Tyr Phe Gly Met Trp Lys Thr Thr Phe Ala
            20                  25                  30

Trp His Thr Glu Asp Met Asp Leu Tyr Ser Ile Asn Tyr Leu His Phe
        35                  40                  45

Gly Glu Pro Lys Ser Trp Tyr Ala Ile Pro Pro Glu
    50                  55                  60
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<210> 25
<211> 56
<212> PRT
<213> Caenorhabditis elegans

<400> 25

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Thr Ile Leu Glu Asp Thr Asn Tyr Glu Ile Lys Gly Val Asn Thr Val
1               5                   10                  15

Tyr Leu Tyr Phe Gly Met Tyr Lys Thr Thr Phe Pro Trp His Ala Glu
            20                  25                  30

Asp Met Asp Leu Tyr Ser Ile Asn Phe Leu His Phe Gly Ala Pro Lys
        35                  40                  45
```

```
Tyr Trp Phe Ala Ile Ser Ser Glu
    50                  55


<210>  26
<211>  60
<212>  PRT
<213>  Drosophila melanogaster

<400>  26

Thr Ile Leu Asn Leu Val Asn Thr Asp Tyr Asn Ile Ile Ile Asp Gly
1               5                   10                  15


Val Asn Thr Ala Tyr Leu Tyr Phe Gly Met Trp Lys Ser Ser Phe Ala
            20                  25                  30


Trp His Thr Glu Asp Met Asp Leu Tyr Ser Ile Asn Tyr Leu His Phe
        35                  40                  45


Gly Ala Pro Lys Thr Trp Tyr Ala Ile Pro Pro Ala
    50                  55                  60


<210>  27
<211>  60
<212>  PRT
<213>  Homo sapiens

<400>  27

Thr Ile Leu Asp Leu Val Glu Lys Glu Ser Gly Ile Thr Ile Glu Gly
1               5                   10                  15


Val Asn Thr Pro Tyr Leu Tyr Phe Gly Met Trp Lys Thr Ser Phe Ala
            20                  25                  30


Trp His Thr Glu Asp Met Asp Leu Tyr Ser Ile Asn Tyr Leu His Phe
        35                  40                  45


Gly Glu Pro Arg Ser Trp Tyr Ser Val Pro Pro Glu
    50                  55                  60


<210>  28
<211>  58
<212>  PRT
<213>  Drosophila melanogaster
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<400> 28

Phe Ala Ser Asp Trp Leu Asn Glu Gln Leu Ile Gln Gln Gly Lys Asp
1 5 10 15

Asp Tyr Arg Phe Val Tyr Met Gly Pro Lys Asn Ser Trp Thr Ser Tyr
20 25 30

His Ala Asp Val Phe Gly Ser Phe Ser Trp Ser Thr Asn Ile Val Gly
35 40 45

Leu Lys Lys Trp Leu Ile Met Pro Pro Gly
50 55

<210> 29
<211> 57
<212> PRT
<213> Schizosaccharomyces pombe

<400> 29

Phe Ala Asp Asp Trp Leu Asn Ala Tyr Val Ile Asp Cys Glu Ser Asp
1 5 10 15

Asp Phe Arg Phe Ala Tyr Leu Gly Ser His Leu Thr Thr Thr Gly Leu
20 25 30

His Thr Asp Tyr Ala Ser His Ser Phe Ser Val Asn Leu Cys Gly Val
35 40 45

Lys Cys Trp Leu Phe Ile Asp Pro Lys
50 55

<210> 30
<211> 349
<212> PRT
<213> Homo sapiens

<400> 30

Met Ala Ala Thr Ala Ala Glu Ala Val Ala Ser Gly Ser Gly Glu Pro
1 5 10 15

Arg Glu Glu Ala Gly Ala Leu Gly Pro Ala Trp Asp Glu Ser Gln Leu
20 25 30

Arg Ser Tyr Ser Phe Pro Thr Arg Pro Ile Pro Arg Leu Ser Gln Ser

```
        35                  40                  45

Asp Pro Arg Ala Glu Glu Leu Ile Glu Asn Glu Glu Pro Val Val Leu
    50                  55                  60

Thr Asp Thr Asn Leu Val Tyr Pro Ala Leu Lys Trp Asp Leu Glu Tyr
65                  70                  75                  80

Leu Gln Glu Asn Ile Gly Asn Gly Asp Phe Ser Val Tyr Ser Ala Ser
                85                  90                  95

Thr His Lys Phe Leu Tyr Tyr Asp Glu Lys Lys Met Ala Asn Phe Gln
            100                 105                 110

Asn Phe Lys Pro Arg Ser Asn Arg Glu Glu Met Lys Phe His Glu Phe
        115                 120                 125

Val Glu Lys Leu Gln Asp Ile Gln Gln Arg Gly Gly Glu Glu Arg Leu
    130                 135                 140

Tyr Leu Gln Gln Thr Leu Asn Asp Thr Val Gly Arg Lys Ile Val Met
145                 150                 155                 160

Asp Phe Leu Gly Phe Asn Trp Asn Trp Ile Asn Lys Gln Gln Gly Lys
                165                 170                 175

Arg Gly Trp Gly Gln Leu Thr Ser Asn Leu Leu Leu Ile Gly Met Glu
            180                 185                 190

Gly Asn Val Thr Pro Ala His Tyr Asp Glu Gln Gln Asn Phe Phe Ala
        195                 200                 205

Gln Ile Lys Gly Tyr Lys Arg Cys Ile Leu Phe Pro Pro Asp Gln Phe
    210                 215                 220

Glu Cys Leu Tyr Pro Tyr Pro Val His His Pro Cys Asp Arg Gln Ser
225                 230                 235                 240

Gln Val Asp Phe Asp Asn Pro Asp Tyr Glu Arg Phe Pro Asn Phe Gln
                245                 250                 255

Asn Val Val Gly Tyr Glu Thr Val Val Gly Pro Gly Asp Val Leu Tyr
            260                 265                 270
```

```
Ile Pro Met Tyr Trp Trp His His Ile Glu Ser Leu Leu Asn Gly Gly
        275                 280                 285

Ile Thr Ile Thr Val Asn Phe Trp Tyr Lys Gly Ala Pro Thr Pro Lys
    290                 295                 300

Arg Ile Glu Tyr Pro Leu Lys Ala His Gln Lys Val Ala Ile Met Arg
305                 310                 315                 320

Asn Ile Glu Lys Met Leu Gly Glu Ala Leu Gly Asn Pro Gln Glu Val
                325                 330                 335

Gly Pro Leu Leu Asn Thr Met Ile Lys Gly Arg Tyr Asn
            340                 345
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<210> 31
<211> 39
<212> PRT
<213> Homo sapiens

<400> 31

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Ser Met Asp Glu Ser Gly Leu Pro Gln Leu Thr Ser Tyr Asp Cys Glu
1               5                   10                  15

Val Asn Ala Pro Ile Gln Gly Ser Arg Asn Leu Leu Gln Gly Glu Glu
            20                  25                  30

Leu Leu Arg Ala Leu Asp Gln
        35
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<210> 32
<211> 52
<212> PRT
<213> Homo sapiens

<400> 32

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Pro Ser Asp Leu Ala Cys Arg Leu Leu Gly Gln Ser Met Asp Glu Ser
1               5                   10                  15

Gly Leu Pro Gln Leu Thr Ser Tyr Asp Cys Glu Val Asn Ala Pro Ile
            20                  25                  30

Gln Gly Ser Arg Asn Leu Leu Gln Gly Glu Glu Leu Leu Arg Ala Leu
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35 40 45

Asp Gln Val Asn
50

<210> 33
<211> 12
<212> PRT
<213> Homo sapiens

<400> 24
Leu Thr Ser Tyr Asp Cys Glu Val Asn Ala Pro Ile
1 5 10

<210> 34
<211> 12
<212> PRT
<213> Homo sapiens

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Leu Leu Gln Gly Glu Glu Leu Leu Arg Ala Leu Asp
1 5 10